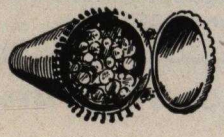
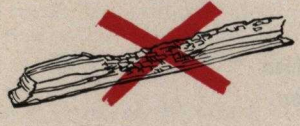
PROTEXOL CORPORATION

Protexol Fireproofed

60 YEARS OF CUSTOM WOOD PRESERVING...



PRESSURE TREATED WOOD



FIRE

TERMITE

DECAY

} RESISTANT

ACCEPTANCE BY

Underwriters' Laboratories, Chicago
Factory Mutual Fire Insurance Cos., Boston
New York Board of Fire Underwriters
National Bureau of Standards
International Association of Fire Chiefs

File—A.I.A. Classification—19:A:33

PROTEXOL CORPORATION · KENILWORTH 2, N. J.

USE FIRE-RETARDANT WOOD ARCHITECTURALLY . .

Services and Products

Fireproofing by the 55-year-old Bachert Process improved to satisfy the requirements of New York Building Code, National Bureau of Standards, Underwriters' Laboratories, Inc., U. S. Navy, Army and other Federal agencies.

Standard Wood Preserving Treatments to American Wood Preservers' Association specifications with Zinc Chloride, Chromated Zinc Chloride, Fluorphenol, Acid Cupric Chromate, Pentachlorphenol.

Combined Fire, Termite and Decay Resistive Treatment with Pyresote (Class D).

Fire Retardant Plywood.

Wood Preserving Oils for brush, spray or open tank treatments and colorless or odorless preservatives. *Get Bulletin 43 for grade best suited.*

Testing. Complete chemical and engineering laboratories. Full size gas-fired furnace for fire tests of door or wall assemblies to A.S.A. and A.S.T.M. standards available for private or official tests.

Fire-Retardant Wood Engineered and Designed by modern methods and using connectors enables its use for any purpose. Conservative engineers and owners may use it with full assurance of complete satisfaction. It is flexible and workable.

Fire-Retardant Wood as a Structural Material is used for all types of fireproof construction to replace heavier materials.

Exposed to acid fumes, as in the roof of pickling or sulphur bleach rooms, fire-retardant wood has merited as low a rate of fire insurance as the installation of sprinklers with every assurance of a longer life than from steel construction. Corroding fumes frequently make the use of wood roofs advisable, and fire-retarding insures the necessary fire protection. In other cases of roof construction acoustical and heat insulating values make the use of wood roof planking advisable. Spark hazards are omnipresent in alcohol or light oil plants and fire-retardant wood walks, stairs, etc., give assurance of protection. Structural uses for fire-retardant wood are limitless.

Strength. Protexol's Products are not injurious to wood fibers and consequently, the strength of fire-retardant lumber and timber is not materially affected. **The same values assigned to untreated wood may be used in calculating loads and stresses.** Ask for details.

Checking is Controlled or eliminated thus allowing use of design section without oversize to compensate for seasoning checks and splits.

Light Weight Fire-Retardant Wood of nominal 2" thickness weighs only 5.2 pounds per square foot, less than half the weight of the nearest competitive material. This allows substantial savings in carrying members, either steel or timber, whose load-bearing requirements are greatly decreased.

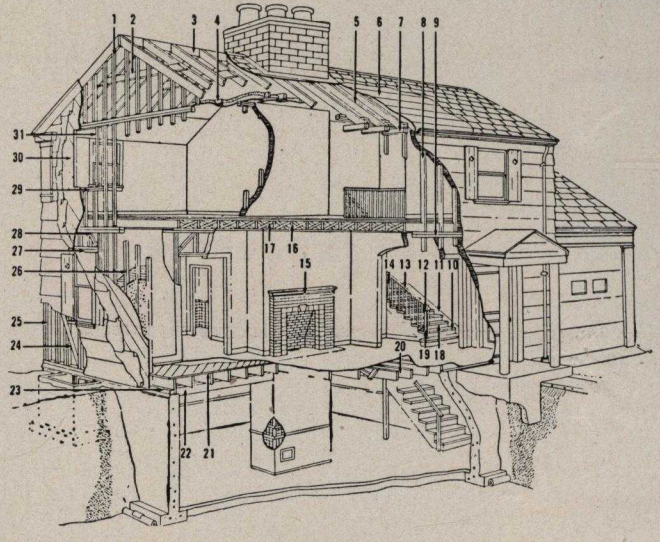
Permanence as is vouched for by Underwriters' Laboratories, Inc., who list Protexol's fire-retardant wood in their Report R-2282 as permanently non-combustible. The fire record of New York City's high buildings since 1899 amply attests the permanence of Protexol treatment.

The treated material under fire attack emits no injurious fumes traceable to the chemicals with which the wood is impregnated.

Chemicals Are Not Corrosive. Corrosiveness of chemicals was covered by report of Underwriters' Laboratories, Inc. The U. S. Forest Products Laboratory reported on metal fastenings in fire-retardant wood removed after 26 years service. "The brass screws and hinges were only slightly tarnished and the iron nails for holding in the moulding were mostly bright with only a few small spotty rust places on them: no portion of these metal fastenings showed any excessive corrosion." This applies to interior uses.

Speed of Erection. Protexol "Job-Designed" wood plank virtually eliminates cutting and waste. There is no form work, or water to dry out. Succeeding trades may proceed as soon as it is placed. Material can be supplied prefabricated and treated.

Low Cost. The cost of fire-retardant wood by the enduring Protexol pressure process is, in truth, very small. On a school building costing $315,000, the percentage of cost for fire-retarding the wood was 2.5%. A large all-timber structure costing $3,000,000, completely fire-proofed, added only 4%. For two large apartment houses, the percentage increase was 2.39% and 2.83% respectively. **The average cost for treatment of structural members and sheathing of a $10,000 house is approximately $250.**



LEGEND

1. Gable Stud
2. Collar Beam
3. Ridge Board
4. Ceiling Joist
5. Rafter
6. Roof Boards
7. Look Out
8. Stud
9. Double Plate
10. Stair Tread
11. Finish Stringer
12. Newel Cap
13. Stair Rail
14. Balusters
15. Mantel
16. Floor Joist
17. Bridging
18. Stair Riser
19. Newel
20. Floor Joist
21. Subflooring
22. Girder
23. Sill
24. Corner Brace
25. Corner Stud
26. Wall Stud
27. Header
28. Window Cripple
29. Rough Header
30. Wall Sheathing
31. Window Stud

PROTEXOL TREATMENT OF THESE MEMBERS

MAKES WOOD HOUSES STRUCTURALLY

- Fire Resistive
- Termite Proof
- Immune to Decay
- Strong and Durable

THE ARCHITECT HAS

- The Most Expressive Medium
- The Material of Character and Distinction

THE BUILDER HAS

- Adaptability
- Ease of Fabrication
- Speed of Erection

THE OWNER HAS

- Comfort with Security
- Protection for His Family
- Quiet—High Acoustical Value
- High Natural Heat Insulation
- No Structural Maintenance
- Low Cost and investment protection
- Enhanced resale value
- The Newest Development in Wood Utilization

Protexol processed wood is clean, odorless,

METROPOLITAN LIFE INSURANCE CO.
STUYVESANT TOWN PROJECT
STARRETT BROS. & EKEN, CONTRS.

Selecting the Proper Treatment

This calls for a careful consideration of all the factors pertaining to decay, fire hazards and use. Toxic chemicals are employed in all Protexol treatments. The chemicals employed in solutions forced into the tissues of the wood remain fixed in the wood.

Class A, so-called **Non-combustible** or Complete Impregnation treatment (heart and sapwood), is designed to protect wood against ignition and spread of flame in locations where the greatest fire hazards exist. It meets the requirements of the Underwriters' Laboratories, Inc., U. S. Government and New York City Building Code, and American Society for Testing Materials Specification E160-46 or E69-46T. It increases the weight of lumber between 5 and 6 lbs. per cu. ft. Listed by Underwriters' Laboratories, Inc.

Class B or **Slow-Burning** Treatment, is recommended for structural timbers for interior use. This treatment is recommended especially for wood used for stage construction as well as for roof planking and trusses. For the best results the timbers should be framed and ready for joining in advance of the treatment. It meets A.S.T.M. Specification E160-46 or E69-46T. Weight of the wood per cubic foot is increased from 3 to 4 lbs. Approved by Associated Factory Mutual Fire Insurance Cos. without sprinklers for its own protection.

Class C or **Non-flammable** treatment, is a less intensive impregnation designed for shoring, scaffolding and other temporary construction, or for conditions which do not offer great fire hazards. This treatment meets New York, Philadelphia and Washington Underwriters' requirements as well as A.S.T.M. Specification C132-40T. It adds approximately 2 lbs. per cu. ft. of wood to the weight.

Class D or trade-marked **"Pyresote"** treatment is designed primarily for structural timbers used in places in which protection against fire, decay and insects is important. This calls for an impregnation of solution that combines resistance to decay, insects and ignition. It is the most comprehensive treatment thus far devised and meets fire resistance requirements of A.S.T.M. Specifications E160-46 or E69-46T, as well as Federal Wood Preserving Specification TT-W-551, or American Wood Preservers' Association Specification 38d or 53a.

Fire-Retardant Plywood is being supplied for finish interiors as well as core for panels and doors. Other uses include bulkheads, insulation, furniture, sheathing, air ducts.

The high native combustibility of plywood is reduced over 90% by Protexol treatment. This allows its use under the building codes in public buildings, hotels, hospitals, schools, etc.

All glues may be used including hot or cold press urea formaldehyde and phenolic resin types. Pre-bonded phenolic resin panels may be treated readily. Get circular 111.

Fire-Retardant Scaffolding. The fact that fire-insurance companies offer a reduced rate of 20% for the use of Protexol's grade-marked fire-retardant scaffolding amply demonstrates its economic value. Its requirement is a form of use and occupancy insurance.

Suggested Specifications

Class A—Fire-Retardant Plywood, Trim, Flooring and Framing—All wood or plywood trim, doors and flooring shall receive a vacuum pressure fire-retardant treatment which will satisfactorily meet the test requirements of the Underwriters' Laboratories, Inc., Chicago, Ill. (*see page 4*), the rules for Inspecting Fireproofed Wood used by the Engineering Laboratory of Columbia University, New York, for the shavings, crib and timber tests; Specification E160-46 or E69-46T of the American Society for Testing Materials; or Navy Dep't Specifications 51C38, 51C40, JAN P-66 (plywood).

It is the intent of these specifications to require a treatment that will insure permanency and non-corrosiveness of the fire retardant chemicals equal to the Class A treatment of the PROTEXOL CORPORATION, Kenilworth, N. J.

Class B—Fire-retarding for Structural Timber—The wood after framing or working to its final dimensions shall receive a vacuum pressure fire-retardant treatment which will satisfactorily meet the fire test requirements of Specification E160-46 or E69-46T of the American Society for Testing Materials, or Navy Dep't specifications.

It is the intent of these specifications to require a treatment which will insure permanency and non-corrosiveness of the fire retardant chemicals equal to the Class B treatment of the PROTEXOL CORPORATION, Kenilworth, N. J.

Class C—Fire-retardant for Scaffolding, Shoring or Other Temporary Construction—All lumber after being worked or framed to its final dimensions, shall receive a vacuum pressure fire-retardant treatment which will insure the lumber meeting the fire test requirements of Specification C132-40T of the American Society for Testing Materials, or Navy Dep't specifications.

It is the intent of these specifications to require a treatment that will insure permanency and non-corrosiveness of the fire retardant chemicals equal to the Class C treatment of the PROTEXOL CORPORATION, Kenilworth, N. J.

Class D—(Pyresote) Combined Fire and Decay Resistance—The wood after working or framing to its final dimensions, shall receive a vacuum pressure treatment with toxic chemicals equal to the requirements of Specifications 38d or 53a of the American Wood Preservers' Association, which, in addition, shall contain fire-retardant chemicals that will insure the chemically treated wood meeting the fire test requirements of Specification E160-46, E69-46T, or C132-40T of the American Society for Testing Materials, or Navy Dep't specifications.

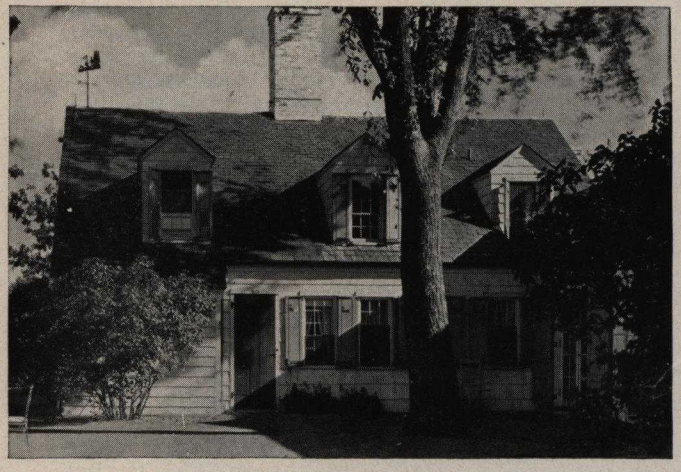
It is the intent of these specifications to require a treatment that will insure the permanency and non-corrosiveness of both toxic and fire retardant chemicals equal to the Class D **(Pyresote)** treatment of the PROTEXOL CORPORATION, Kenilworth, N. J.

Fire-Retardant Wood Doors—Flush doors of 1¾-in. thickness with face veneers of (species of wood) shall be of fire-retardant wood capable of meeting the one-hour standard fire test as required by Specification C152-41 of the American Society for Testing Materials.

quiet, proof against fire, decay and termites

UNDERWRITERS' LABORATORIES RATING

Listed—Inspection Service with Certificate.
Fire Hazard Classification
(Untreated Red Oak = 100) ..... Red Oak, Douglas Fir, Plywood (Douglas Fir)
Flame Spread ..... 25 to 35
Fuel Contributed ..... 15 to 20
Smoke Developed ..... Less than untreated lumber



Natural Beauty of fire-retardant wood is predicated on fact that there is no material change in color. It may be finished in any way. The salts act as a filler and only a sealing coat is required. Takes paint better than untreated wood.

Milling or fabricating to intricate designs is possible as in untreated wood.

There is less tendency to expand and contract, due to inclination of moisture to remain near exterior. This eliminates unsightly checks and cracks. Superior wear also results; better nail holding power keeps floors tight eliminating squeaks when Protexol Processed wood is specified and used. Get circular 104.

Wood Is Fire-retarded by a process of impregnation essentially the same as that followed in other processes of wood preservation. The wood is treated in a sealed cylinder on which a vacuum has been drawn, after which the chemical solution is forced into the wood under high air pressure. This is done in accordance with the standardized procedure of the American Wood Preservers' Association Specification 38d or 53a.

Treatments Against Decay and Termites

Protexol offers most of the standard salt preservatives which have proven their efficiency. The treatments conform to standard specifications of the American Wood Preservers' Association and the Federal Specifications Board.

These treatments are all clean and odorless and are readily paintable. Preservatives, general retention in pounds per cubic foot dry salt basis and governing Federal Specifications are:

Chromated Zinc Chloride	.75 lbs.	Specification TT-W-551
Zinc Chloride	1.0 lbs.	Specification TT-W-576
Fluor-Phenol	.35 lbs.	Specification TT-W-573
Acid Cupric Chromate	.75 lbs.	Specification TT-W-546
Pentachlorphenol	6.00 lbs.	Specification TT-W-570

Protexol also offers Pentachlorphenol preservatives, pressure treated to standard specifications. These preservatives are highly permanent, being virtually insoluble in water. They may be painted without difficulty and are suitable for use in sash, doors and trim. Boardwalks, decking and structural members can be effectively preserved. These treatments include water repellant properties rendering the treated wood dimensionally stable.

Facilities. Plants geographically situated to serve almost every area and affording the maximum transportation economies possible. All equipped with high pressure treating cylinders and most with kiln drying facilities.

Certification. The label of the Underwriters' Laboratories may be stamped on every piece of material in a shipment. Certified statements as to the treatments applied to wood as well as the tests made at Protexol Laboratories will be supplied upon request. Inspection of both treatments and tests by purchasers is respectfully invited.

Midwest Sales, Treating and Fabricating Facilities

FOX BROS. MFG. CO.
(Custom-Built Millwork)
2717 Sidney Street **St. Louis 4, Mo.**
Tel.: Grand 9900

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